17/1600

TDANGE	A 1	Application Number	10/025,514
** TRANSMITT	4L	Filing Date	December 18, 2001
FORM		First Named Inventor	Philip J. BARR
(to be used for all correspondence after	initial filing)	Group Art Unit	M. Walicka er 368292000200 that apply) After Allowance Communication
	15 pages +	Examiner Name	M. Walicka
Total Number of Pages in This Submiss	1 reference	Attorney Docket Number	er 36829 2000200
	ENCLOS	SURES (check all	that apply)
x Fee Transmittal Form + duplicate copy for fee processing (2 pages)	Assignment I		After Allowance Communication to Group
Fee Attached	Drawing(s)		Appeal Communication to Board Appeals and Interferences
Amendment/Reply	Licensing-rel	ated Papers	Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
After Final	Petition		Proprietary Information
Affidavits/declaration(s)	Petition to Co	onvert to a Provisional	Status Letter
Extension of Time Request		mey, Revocation prespondence Address	X Other Enclosure(s) (please identify below)
Express Abandonment Request	Terminal Disc	claimer	Copy of International Sear Report dated June 27, 200
x Information Disclosure Statement (Supplemental) (3 pages)	Request for	Refund	(7 pages) • Form PTO-1449 + duplica copy (2 pages)
Certified Copy of Priority Document(s)	CD, Number	of CD(s)	One (1) referenceReturn Receipt Postcard
Response to Missing Parts/ Incomplete Application	Remarks		
Response to Missing Parts under 37 CFR 1.52 or 1.53			
SIGNA	TURE OF APPLICA	ANT, ATTORNEY, OR A	GENT
MORRISON & FOEI		/2	5226
ndividual Name			
signature		4/MI_	
Date August 7, 2003	·		

PTO/SB/17 (01-03)

Approved for use through 04/30/2003. OMB 0651-0032 Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE	TR	AN	SM	IT	TAL
	for	FY	200	03	

Patent fees are subject to annual revision.

10/025,514 Application Number December 18, 2001 Filing Date Philip J. BARR First Named Inventor **Examiner Name** M. Walicka 1652

Complet if Known '

TROPING TO STORY Applicant claims small entity status. See 37 CFR 1.27 Group Art Unit 368292000200 TOTAL AMOUNT OF PAYMENT (\$) 180.00 Attorney Docket No. METHOD OF PAYMENT (check all that apply) FEE CALCULATION (continued) Money 3. ADDITIONAL FEES Check Other None Deposit Account X Large Entity Small Entity Deposit 03-1952 Fee Code Fee (\$) Fee Code **Account** Fee Description (\$) Number Deposit 1051 130 2051 65 Surcharge - late filing fee or oath Morrison & Foerster LLP Account Name Surcharge - late provisional filing fee or cover 1052 50 2052 25 The Commissioner is hereby authorized to: (check all that apply) X Charge fee(s) indicated below X Credit any overpayments 1053 130 1053 130 Non-English specification Charge any additional fee(s) during the pendency of this application х 1812 2.520 1812 2,520 For filing a request for ex parte reexamination Requesting publication of SIR prior to Charge fee(s) indicated below, except for the filing fee 1804 920* 1804 920° Examiner action Requesting publication of SIR after to the above-identified deposit account. 1805 1805 1,840 1,8401 **FEE CALCULATION** 1251 110 2251 Extension for reply within first month 1. BASIC FILING FEE 1252 410 2252 205 Extension for reply within second month Large Entity Small Entity 1253 930 2253 465 Extension for reply within third month 2254 Fee Description 1254 1,450 725 Extension for reply within fourth month Fee Paid Code (\$) Code (\$) 1001 750 2001 375 Utility filing fee 1255 1,970 2255 Extension for reply within fifth month 1002 330 2002 165 Design filing fee 1401 320 2401 160 Notice of Appeal 1003 520 2003 260 Plant filing fee 1402 320 2402 160 Filing a brief in support of an appeal 1004 750 2004 375 Reissue filing fee 1403 280 2403 140 Request for oral hearing 1005 160 2005 Provisional filing fee 1451 1451 1,510 Petition to institute a public use proceeding 1.510 1452 2452 110 55 Petition to revive - unavoidable SUBTOTAL (1) 0.00 1453 1,300 2453 650 Petition to revive - unintentional 1501 1.300 2501 Utility issue fee (or reissue) 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE 650 Fee from Extra 1502 470 2502 235 Design issue fee Fee Paid Claims below Total Claims 83 -83** = 0.00 1503 630 2503 315 Plant issue fee 0 9.00 Independent 130 Petitions to the Commissioner 130 1460 1460 4 -4** = 0 42.00 0.00 Claims 1807 50 1807 Processing fee under 37 CFR 1.17(q) Multiple Dependent 140.00 0.00 Submission of Information Disclosure Stmt 180.00 1806 180 1806 180 Large Entity Small Entity Recording each patent assignment per Fee 40 8021 40 Fee Description 8021 Code (\$) Code (\$) property (times number of properties) Filing a submission after final rejection 1202 18 2202 Claims in excess of 20 9 750 2809 1809 375 (37 CFR 1.129(a)) 1201 R4 2201 42 Independent claims in excess of 3 For each additional invention to be 1810 750 2810 375 1203 280 2203 140 Multiple dependent claim, if not paid examined (37CFR 1.129(b)) 1204 84 2204 42 Reissue independent claims 1801 750 2801 Request for Continued Examination (RCE) over original patent Request for expedited examination 1802 900 1802 1205 18 2205 Reissue claims in excess of 20 of a design application and over original patent Other fee (specify) 180,00 SUBTOTAL (3) (\$) SUBTOTAL (2) (\$) 0.00 *Reduced by Basic Filing Fee Paid **or number previously paid, if greater; For Reissues, see above

SUBMITTED BY					Complete ('if applicable)
Name (Print/Type)	ENC.H. Wit	1/1/	Registration No. Attorney/Agent)	44,408	Telephone	(650) 813-5755
Signature		HUXTA	/-		Date	August 7, 2003



PATENT Docket No. **36829**2000200

CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandriae.VA 22313-1450

Julie M. Hassell

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Philip J. BARR, et al

Serial No.: 10/025,514

Filing Date: December 18, 2001

For: MULTIFUNCTIONAL PROTEASE

INHIBITORS AND THEIR USE IN TREATEMENT OF DISEASE

Examiner: M. Walicka

Group Art Unit: 1652

TECH CENTER 1800,3003

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97 AND § 1.98

Mail Stop AF Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, Applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO-1449. A copy of the document is also submitted herewith. The Examiner is requested to make this document of record.

| GARTE 00000069 031952 | 10025514

100,00 00

The document on the attached Form PTO-1449 was cited in an International Preliminary Examination Report mailed on June 27, 2003 (copy attached) directed to a counterpart international application and was not previously submitted.

	This Su	applemental Information Disclosure Statement is submitted:
	With	the application; accordingly, no fee or separate requirements are required.
	Withi	n three months of the application filing date or before mailing of a first Office
	Actio	n on the merits; accordingly, no fee or separate requirements are required.
	After	receipt of a first Office Action on the merits but before mailing of a final Office
	Actio	n or Notice of Allowance.
		A fee is required. A check in the amount of is enclosed.
		A fee is required. Accordingly, a Fee Transmittal form (PTO/SB/17) is attached
		to this submission in duplicate.
		A Certification under 37 C.F.R. § 1.97(e) is provided below; accordingly; no fee
		is believed to be due.
\boxtimes	After	mailing of a final Office Action or Notice of Allowance, but before payment of the
	issue	fee.
		A Certification under 37 C.F.R. § 1.97(e) is provided below and a check in the
		amount of is enclosed.
	\boxtimes	A Certification under 37 C.F.R. § 1.97(e) is provided below and a Fec Transmittal
		form (PTO/SB/17) is attached to this submission in duplicate.

I hereby certify that each item of information was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

The information contained in this Information Disclosure Statement under 37 C.F.R. § 1.97 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorize the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to <u>Deposit Account No. 03-1952</u> referencing <u>368292000200</u>. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: August 7, 2003

Respectfully submitted,

Eric Witt

Registration No. 44,408

Morrison & Foerster LLP 755 Page Mill Road

Palo Alto, California 94304-1018

Telephone: (650) 813-5755 Facsimile: (650) 494-0792

Farma DTC	1440			Docket Number 3	68792000200	Application Nu	Sheet 1 of 1 mber 10/025,514
Form PTC					08272000207	Application 14th	10/023,314
INFO		ON DISCLO AN APPLIC	SURE CITATION ATION	Applicant	Philip J.	BARR, et al	
6	P EU	se several sheets if i	necessary)	Filing Date Decen	nber 18, 2001	Group Art Unit	1652
/5		CE CE		Mailing Date Aug	ust 7, 2003		
AU	6 1 1 200 6 TRADEN		U.S. PAT	TENT DOCUMEN	NTS		
Examiner	Ref.	Date	Document No.	Name	Class	Subclass	Filing Date If
Initials	No.	Dute	Bootiment No.	, vaine		Buociass	Appropriate
	.			PATENT DOCUM			
Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
	1.	11/19/1998	WO 98/51788	WIPO			
		T	HER DOCUMENT	S (including a	uthor, title, Date, Perti	nent Pages, Etc.)	
Examiner Initials	Ref. No.	Title					
						RE	CEIVED
						AU	G 1 3 2003
						TECH CE	NTER 1600/29 00
EXAMI	VER:			DATE C	ONSIDERED:		
FXAMIN	ER: Initia	al if citation cons	idered, whether or not the	citation conforms with	MPEP 600 Draw a	line through the	citation if not in

conformance and not considered. Include a copy of this form with next communication to applicant.

FATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

COPY

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 368292000240		f Transmittal of International Search Report 20) as well as, where applicable, item 5 below.			
International application No.	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)			
PCT/US 01/49256	18/12/2001	18/12/2000			
Applicant					
ARRIVA PHARMACEUTICALS, I	NC.				
This International Search Report has been according to Article 18. A copy is being tra	n prepared by this International Searching Auth ansmitted to the International Bureau.	ority and is transmitted to the applicant			
This International Search Report consists X It is also accompanied by	of a total of Sheets. a copy of each prior art document cited in this	report.			
1. Basis of the report					
	international search was carried out on the bas less otherwise indicated under this item.	is of the international application in the			
the international search w Authority (Rule 23.1(b)).	vas carried out on the basis of a translation of th	ne international application furnished to this			
ľ		ternational application, the international search			
. —	onal application in written form.				
<u> </u>	ernational application in computer readable forn	1.			
	o this Authority in written form.				
	this Authority in computer readble form.				
the statement that the sui	bsequently furnished written sequence listing de as filed has been furnished.	oes not go beyond the disclosure in the			
the statement that the infe	ormation recorded in computer readable form is	identical to the written sequence listing has been			
2. X Certain claims were fou	nd unsearchable (See Box I).				
3. Unity of Invention is lac	king (see Box II).				
4. With regard to the title,					
X the text is approved as su	bmitted by the applicant.				
the text has been establis	shed by this Authority to read as follows:				
5. With regard to the abstract,					
X the text is approved as su	ubmitted by the applicant.				
	shed, according to Rule 38.2(b), by this Authorice date of mailing of this international search rep				
6. The figure of the drawings to be pub	lished with the abstract is Figure No.				
as suggested by the app		None of the figures.			
because the applicant fai	led to suggest a figure.				
because this figure bette	r characterizes the invention.				

emational application No. PCT/US 01/49256

INTERNATIONAL SEARCH REPORT

Box i	Observations where certain claims were fund unsurchable (Continuation fit m 1 first sheet)
This Inte	emational Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. χ	Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely: Although claims 26-35 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2.	Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
з. 🔲	Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
BxII	Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This Inte	ernational Searching Authority found multiple inventions in this international application, as follows:
	see additional sheet
1. X	As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.	As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.	As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.	No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remari	The additional search fees were accompanied by the applicant's protest. X No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (1)) (tuly 1998)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 2,4,16,17 (all completely) and claims 1,5-14, 26-35 (all partially)

· .

A fusion protein comprising alpha 1-antitrypsin (or a functionally active portion thereof) and secretory leukocyte protease inhibitor (or a functionally active portion thereof). A polynucleotide, an expression vector, a host cell and a pharmaceutical composition, all relating to said fusion protein.

2. Claims: 3,15,18-25 (all completely) and claims 1,5-14, 26-35 (all partially)

A fusion protein comprising alpha 1-antitrypsin (or a functionally active portion thereof) and tissue inhibitor of metalloproteases (or a functionally active portion thereof). A polynucleotide, an expression vector, a host cell and a pharmaceutical composition, all relating to said fusion protein.

Int Nonal Application No PCI/US 01/49256

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C12N15/62 C12N15/15

C07K14/81

A61K38/55

A61K38/57

Relevant to claim No.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

CHEM ABS Data, SCISEARCH, LIFESCIENCES, SEQUENCE SEARCH, MEDLINE, BIOSIS, EMBASE, WPI Data, EPO-Internal, PAJ

1	C. DOCUME	INTS CONSIDERED TO BE RELEVANT
ı	Category °	Citation of document, with indication, where appropriate, of the relevant passages

X	EP 0 283 932 A (HOECHST AG) 28 September 1988 (1988-09-28)	1
Υ	page 3, line 43 - line 46	2-35
Y	BINGLE ET AL: "Secretory leukoprotease inhibitor: partnering alphal-proteinase inhibitor to combat pulmonary inflammation" THORAX, LONDON, GB, vol. 51, no. 12, 1996, pages 1273-1274, XP002089585 the whole document	2,4-14, 16,17, 26-35

IX I

Patent family members are listed in annex.

- * Special categories of cited documents :
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filling date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed
- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

2 7 JUN 2003

17 June 2003
Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016 Authorized officer

Madruga, J

Int stonel Application No PC (/US 01/49256

		PCT/US 01/49256	
	ation) DOCUMENTS CONSIDERED TO BE RELEVANT		
ategory *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
	LEE GEOFFREY F ET AL: "Potent bifunctional anticoagulants: Kunitz domain-tissue factor fusion proteins." BIOCHEMISTRY, vol. 36, no. 19, 1997, pages 5607-5611, XP002231849	1	
	ISSN: 0006-2960 the whole document	2-35	
	SCHASTEEN C S ET AL: "SYNTHETIC PEPTIDE INHIBITORS OF COMPLEMENT SERINE PROTEASES-III. SIGNIFICANT INCREASE IN INHIBITOR POTENCY PROVIDES FURTHER SUPPORT FOR THE FUNCTIONAL EQUIVALENCE HYPOTHESIS" MOLECULAR IMMUNOLOGY, ELMSFORD, NY, US, vol. 28, no. 1/2, 1991, pages 17-26, XP001105438 ISSN: 0161-5890 the whole document	1-35	
	URWIN ET AL: "enhanced transgenic plant resistance to nematodes by dual proteinase inhibitor constructs" PLANTA, SPRINGER VERLAG, DE, vol. 204, April 1998 (1998-04), pages 472-479, XP002097968 ISSN: 0032-0935 the whole document	1-35	
1	US 5 633 227 A (DELARIA KATHERINE A ET AL) 27 May 1997 (1997-05-27) the whole document	1,2, 4-14,16, 17,26-35	
A	POTEMPA J ET AL: "THE SERPIN SUPERFAMILY OF PROTEINASE INHIBITORS: STRUCTURE, FUNCTION, AND REGULATION" JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 269, no. 23, 10 June 1994 (1994-06-10), pages 15957-15960, XP001120289 ISSN: 0021-9258 the whole document	1,2, 4-14,16, 17,26-35	
	-/		

Int tional Application No PC1/US 01/49256

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT Category Citation of document, with indication, where appropriate, of the relevant passages				
ategory • Citation of document, with indication, where appropriate, of the relevant passages				
	Relevant to claim No.			
BARNES P J: "NOVEL APPROACHES AND TARGETS FOR TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE" AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE, AMERICAN LUNG ASSOCIATION, NEW YORK, NY, US, vol. 160, no. 5, PART 2, November 1999 (1999-11), pages S72-S79, XP001098482 ISSN: 1073-449X the whole document	1,2, 4-14,16, 17,26-35			
WO 98 51788 A (VERHEIJEN JOHAN HENDRIKUS;TNO (NL); QUAX PAULUS HUBERTUS ANDREAS) 19 November 1998 (1998-11-19) page 3, line 12 - line 23 page 6, line 16 - line 29	3,15, 18-25			
DOCHERTY A J P ET AL: "SEQUENCE OF HUMAN TISSUE INHIBITOR OF METALLOPROTEINASES AND ITS IDENTITY TO ERYTHROID-POTENTIATING ACTIVITY" NATURE, MACMILLAN JOURNALS LTD. LONDON, GB, vol. 318, 7 November 1985 (1985-11-07), pages 66-69, XP000650078 ISSN: 0028-0836 cited in the application the whole document	1,3, 5-15, 18-35			
MURPHY G ET AL: "THE N-TERMINAL DOMAIN OF TISSUE INHIBITOR OF METALLOPROTEINASES RETAINS METALLOPROTEINASE INHIBITORY ACTIVITY" BIOCHEMISTRY, AMERICAN CHEMICAL SOCIETY. EASTON, PA, US, vol. 30, no. 33, 20 August 1991 (1991-08-20), pages 8097-8102, XP000218096 ISSN: 0006-2960 cited in the application the whole document	1,3, 5-15, 18-35			

Infor. on on patent family members

Int Honel Application No PC I /US 01/49256

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0283932 A	Α	28-09-1988	DE	3709255 A1	29-09-1988
			AU	611676 B2	20-06-1991
			AU	1328888 A	22-09-1988
			DK	151788 A	21-09-1988
			EP	0283932 A2	28-09-1988
			FΙ	881268 A	21-09-1988
			HU	46740 A2	28-11-1988
			JP	63267294 A	04-11-1988
			PT	87009 A ,1	3 01-04-1988
			ZA	8801948 A	28-12-1988
US 5633227 /	A	27-05-1997	AT	234117 T	15-03-2003
			CA	2199746 A1	21-03-1996
			DE	69529912 D1	17-04-2003
			ΕP	0787016 A1	06-08-1997
			JP	10505833 T	09-06-1998
			WO	9608275 A1	21-03-1996
WO 9851788	A	19-11-1998	AU	7553698 A	08-12-1998
			EP	0981606 A2	01-03-2000
			JP	2001525669 T	11-12-2001
			WO	9851788 A2	19-11-1998
			NO	995564 A	11-01-2000
			NZ	500656 A	30-11-2001